

**REMARKS**

With this Amendment, Applicant adds new claims 13 and 14. Therefore, claims 1-14 are all the claims pending in the Application. With this Amendment, Applicant adds new claims 13 and 14 in order more fully to cover various aspects of Applicant's invention as disclosed in the Specification. All new claims are fully supported in the originally filed Specification and are patentable at least by the virtue of their dependencies. Entry and allowance of these claims are respectfully requested.

Claims 1-12 remain rejected under 35 U.S.C. § 102(e) as being anticipated by Epps et al. (US Patent No. 6977930).

**Rejection of claims 1-12 under § 102(e) as being anticipated by Epps**

The Examiner, in the Advisory Action dated January 14, 2009, maintains that Epps discloses a packet forwarding system, comprising: a packet memory management unit for assembling the first data into an Internet Protocol (IP) packet and loading the IP packet into a packet memory, and reading out a pointer of an IP packet header and a pointer of an IP packet trailer connected to the IP packet header. The Examiner also maintains that Epps discloses the packet forwarding system as claimed in claim 1, wherein the packet memory management unit includes: a packet generator for generating the IP packet from the first data.

Applicants, however, submit that each and every element of the claims is not disclosed by Epps. More specifically, Applicants submit that Epps fails to disclose or suggest a packet

forwarding system, comprising, *inter alia*, a header processing unit for deciding a packet classification and a transmission destination by using the IP packet header **provided from the packet memory management unit, and reporting to the packet memory management unit** the pointer of the IP packet trailer to be connected to the IP packet header. In the Office Action dated November 7, 2008, the Examiner corresponds the pipelined switch 220 to the claimed header processing unit and the receive FIFO 215 to the claimed packet memory management unit. Epps discloses that there is no feedback from one pipeline stage to the previous, except for the handshake of passing packets forward from stage to stage (co. 6, lines 3-5). Since claim 1 recites the IP packet header being provided from the packet memory management unit to the header processing unit and reporting to the packet memory management unit the pointer of the IP packet trailer, there is clearly a feedback from one stage to the previous stage. Since Epps's pipelined packet switching and queuing architecture does not allow feedback from one pipeline stage to the previous, Epps fails to disclose or suggest a header processing unit for deciding a packet classification and a transmission destination by using the IP packet header provided from the packet memory management unit, and reporting to the packet memory management unit the pointer of the IP packet trailer to be connected to the IP packet header.

In addition, Applicants submit that Epps fails to disclose or suggest a packet forwarding system, comprising, *inter alia*, a header processing unit for deciding a packet classification and a transmission destination by using the IP packet header provided from the packet memory management unit, and **reporting to the packet memory management unit the pointer of the IP packet trailer** to be connected to the IP packet header. In the Office Action dated November

7, 2008, the Examiner cites col. 15, lines 12-27 as allegedly disclosing the above limitations of claim 1. Epps, however, discloses that both the header and the tail portions are received at the receive buffer manager 240 from the header FIFO 320 (col. 15, lines 12-27). Although Epps discloses PHB pointers, where each PHB pointer points to a corresponding PHB, Applicants note that Epps fails to disclose or suggest that a pointer to the tail portion is transmitted from the header FIFO 320 to the receive buffer manager 240.

Furthermore, an exemplary object of the present invention may be to prevent unnecessary time consumption for processing the header. Applicants note that the an exemplary embodiment of the present invention discloses a packet memory management unit that reads only the IP packet header and does not read the pointer of the IP packet header. See e.g., Fig. 4. In addition, the exemplary embodiment of the present invention discloses the transmission of only the IP packet header from the header processing unit to the output unit, but the pointer of the IP packet header is not transmitted from the header processing unit to the output unit.

Specifically, in an exemplary embodiment of the invention, in a packet forwarding system having a conventional transmission queue mode, a header processing unit transmits not only the IP packet header but also a trailer which is not in use, so a fall in performance occurs due to unnecessary time consumption. In order to solve this problem, in the present invention, the transmission header queue 470 of the packet memory management unit 400 transmits only the IP packet header to the header processing unit 600, reads a trailer connected to a header based on a tag transmitted together from the packet memory 490, and directly transmits the

trailer to the output unit 700, thereby preventing the unnecessary time consumption for processing the header.

However, Epps does not teach the above technical feature of the present invention, so the present exemplary embodiment is distinct from the cited reference.

Applicants note that in a packet forwarding system having a conventional transmission queue, such as one disclosed by Epps, a header processing unit transmits not only the IP packet header but also a trailer which is not in use. An example of this is shown in col. 15, lines 12-27 where both the header and tail portions are transmitted from the header FIFO 320 to the receive buffer manager 240. This results in a fall in performance due to unnecessary time consumption. Therefore, Applicants submit that an exemplary object of the present invention makes up for the deficiencies of Epps.

For at least the reasons submitted above, Applicants submit that claim 1 is patentable.

For reasons similar to those submitted for claim 1, Applicants submit that claim 6 is patentable.

Claims 2-5 and 7-12 which depend from claims 1 or 6, are patentable by virtue of their dependencies.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)  
U.S. Application No.: 10/777,150

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,  
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